

### Amendments to the Claims:

This listing of claims will replace all prior versions and listings of the claims in this application:

### **Listing of the Claims:**

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Claims 1-5 (Cancelled)

6. (Currently amended) An implant useful in orthopedic surgery comprising at least one assembled bone block and at least one section of flexible material attached to said at least one assembled bone block, said at least one assembled bone block comprising a first segment of cortical bone and a second segment of cortical bone that are shaped to interlock with one another.

7. (Currently amended) The implant of claim 6, wherein said at least one assembled bone block comprises ~~an assembled implant comprising~~ at least two substantially planar segments, wherein at least one of said at least two substantially planar segments comprises at least one slot defined thereon, and wherein said at least two substantially planar segments are fastened together by sliding said at least one slot ~~of at least one planar segment~~ over another substantially planar segment.

8. (Currently amended) The implant of claim 7, wherein said at least one assembled bone block comprises a first substantially planar segment having a first slotted section thereon and a second substantially planar segment having a second slotted section thereon, wherein said first substantially planar segment and said second substantially planar segments segment ~~comprise a slot longitudinally defined thereon such that said first and second substantially planar segments comprise a slotted section and a body section, and wherein said first and second substantially planar segments are fastened together by sliding the first slotted section into a slot formed by the second slotted section of each over the body portion of the other.~~

9. (Currently amended) The implant of claim 6, ~~said implant comprising at least one assembled block, wherein said first segment of cortical bone is assembled block is comprised of two or more segments made of mineralized bone, demineralized bone or a synthetic material, or a combination thereof; and at least one flexible band attached to said at least one assembled block, wherein said band is comprised of a natural material or of a synthetic material.~~

10. (Currently amended) The implant of claim 6, wherein said at least one section of flexible material is ~~comprised of dermis~~ selected from the group consisting of ligament, tendon, muscle, dura, pericardium, fascia, peritoneum and demineralized bone.

93 11. (Currently amended) A bone-ended graft useful in orthopedic surgery comprising at least one assembled bone block and at least one section of flexible tissue attached to said at least one assembled bone block, said at least one assembled bone block comprising two interconnected segments of allograft or xenograft cortical bone.

12. (Original) The bone-ended graft of claim 11, wherein said flexible tissue comprises soft tissue, dermis, pericardium, fascia, woven soft tissue, urinary bladder membrane, dura mater, demineralized bone, or skeletal muscle.

13. (Original) The bone-ended graft of claim 11, wherein said flexible tissue is dermis.

14. (Currently amended) The implant of claim 11, wherein said at least one assembled bone block comprises a first substantially planar segment of cortical bone having a first slotted segment thereon and a second substantially planar segment of cortical bone having a second slotted segment thereon, wherein said first and second substantially planar segments are made of bone and comprise a slot longitudinally defined thereon such that

said first and second substantially planar segments comprise a slotted section and a body section, and wherein said first and second substantially planar segments are fastened together by sliding the first slotted section into a slot formed by the second slotted section ~~of each over the body portion of the other.~~

15. (Currently amended) The bone-ended graft of claim 14, wherein said at least one assembled bone block comprises two or more longitudinal fins, and wherein said flexible tissue is attached to said ~~at least one~~ assembled bone block by contact with at least one of said two or more fins.

16. (Currently amended) The bone-ended graft of claim 11, wherein said at least one assembled bone block is cut to provide a groove sufficient to accommodate a fixation screw.

17. (Currently amended) The bone-ended graft of claim 11, wherein said at least one assembled bone block is shaped into a dowel.

18. (Currently amended) The bone-ended graft of claim 11, wherein said at least one assembled bone block is 9mm, 10mm, 11mm, or 12 mm in diameter.

19. (Currently amended) The bone-ended graft of claim 16, wherein said groove is a radius cut extending the length of the assembled bone block.

20. (Currently amended) The bone-ended graft of claim 11, wherein said assembled bone block has a thread profile positioned on its surface in the groove.

21. (Currently amended) The bone-ended graft of claim 11 wherein said ~~tendon~~ flexible tissue has a first end and a second end, and wherein said one or more bone blocks

~~comprises~~ comprise a first assembled bone block attached to said first end and second assembled bone block attached to said second end.

22. (Currently amended) The bone-ended graft of claim 11 wherein said implant material is attached to said at least one assembled bone block by chemical annealing, chemical adhesive, suturing (~~optionally through drilled holes in the bone~~), pinning to, or wrapping and tying the implant material around the bone ends (and optionally applying a suitable adhesive).

23. (Currently amended) The bone-ended graft of claim 11 wherein at least one of said at least one assembled bone block comprises two or more longitudinal fins extending from at least one end of said at least one assembled bone block.

24. (Original) The bone-ended graft of claim 23, wherein said at least one section of flexible tissue passes along a first channel between adjacent fins, loops around a far end of the bone-ended graft, and passes back along a second channel between adjacent fins, and attaches to a section of itself to form a loop encircling the bone-ended graft.

25. (Original) The bone-ended graft of claim 23 wherein the processed implant material passes through at least one hole in at least one fin of the bone-ended graft, and attaches to a section of itself to form a loop encircling the bone-ended graft.

26. (Original) The bone-ended graft of claim 23 wherein aid at least one section of material contacts the ends of two or more fins and is secured into place by compression onto said two or more fins.

27. (Currently amended) The bone-ended graft according to claims 11 further comprising at least one interference screw that is placed alongside said at least one bone-block, wherein when so placed in a hole in a bone in a recipient in need of ~~[[a]]~~ said bone-

ended graft, said screw compresses against an adjacent section of the hole wall, and also compresses said bone-ended graft against other sections of the hole wall.

28. (Currently amended) An ~~assemblable fixation plug~~ assembled implant for attachment with at least one length of flexible material, comprising:

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- a. a first matable segment ~~comprising~~ having a first ~~at least one~~ inner mating surface, said first inner mating surface ~~of said first segment~~ comprising at least one protrusion extending therefrom; and
  - b. a second matable segment ~~comprising~~ having a second ~~at least one~~ inner mating surface, said second inner mating surface ~~of said second segment~~ comprising at least one hole formed thereon to receive the at least one ~~alignment~~ protrusion on said first segment inner mating surface; and
  - c. wherein when a section length of said flexible material is placed between  
the inner mating surfaces of the first and the second segments, and such  
that when the first and second segments are joined so the at least one hole  
receives the at least one protrusion, said section length of flexible material  
is compressed or held therebetween.

29. (Currently amended) The ~~assemblable fixation plug~~ assembled implant of claim 28, wherein the first inner mating surface and the second inner mating surface are substantially flat.

30. (Currently amended) The ~~assemblable fixation plug~~ assembled implant of claim 28, wherein said first matable segment and said second matable segment segments are semi-conical shaped and comprise an exterior surface with threads defined thereon, wherein when said first and second segments are brought together, said threads are aligned.

31. (Currently amended) The ~~assemblable fixation plug~~ assembled implant of claim, wherein said at least one protrusion comprises a pin.

32. (Currently amended) The ~~assemblable fixation plug~~ assembled implant of claim 28, wherein said inner mating surface of said first segment, second segment or both comprises, teeth, ridges, grooves or another irregular shape to prevent slippage of aid flexible material out of said assemblable fixation plug when assembled.

33. (Currently amended) The ~~assemblable fixation plug~~ assembled implant of claim 28 32, additionally comprising an aperture formed on at lest one end to receive a driving tool.

34. (Currently amended) The ~~assemblable fixation plug~~ assembled implant of claim 28, additionally comprising a depression in one or both of the inner mating surfaces, and ~~wherein said a thickened~~ section of flexible material positioned in said depression is thickened, whereby upon tightening of the first and second segments, the thickened ~~end~~ section is retained in said depression and is restricted from sliding out of the ~~plug~~ assembled implant.

35. (Currently amended) The ~~assemblable fixation plug~~ assembled implant of claim 28, wherein said first matable segment and said second matable segment segments are comprised of allograft or xenograft mineralized bone, demineralized bone or a synthetic material, or a combination thereof; and said ~~at least one~~ length of flexible material is comprised of soft tissue ~~or of a synthetic material~~ selected from the group consisting of ligament, tendon, muscle, dura, pericardium, fascia, peritoneum and demineralized bone.

Claims 36-63 (Cancelled)

64. (Currently amended) A dermis derived bone-ended graft useful in orthopedic surgery comprising at least one assembled bone block and an elongated section of processed dermis attached to said at least one bone block.

65. (Currently amended) The graft of claim 64, wherein at least one of the at least one assembled bone block is comprised of cortical, cancellous, cortico-cancellous, or demineralized bone, obtained from human or xenograft sources, optionally in combination with the synthetic material.

66. (Currently amended) The graft of claim 65, wherein at least one of the at least one assembled bone block is comprised of ~~at least~~ two segments.

67. (Currently amended) The graft of claim 66, wherein said ~~at least~~ two segments are in the shape of disks.

68. (Currently amended) A soft tissue implant for spanning two or more vertebrae, or for spanning a bone fracture site, comprising:

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- a. a middle section capable of flexion and having a first end and an opposing second end;
  - b. a ~~contiguous~~ top section attached to the first end of said middle section and comprising a first assembled bone block having at least one aperture for ~~an~~ attaching means to a first vertebrae or to a section of bone on a first side of a fracture, said first assembled bone block comprising two segments of cortical bone; and
  - c. a contiguous bottom section attached to the second end of said middle section and comprising a second assembled bone block having at least one aperture for ~~an~~ attaching means to a second vertebrae or to a section of bone on an opposing side of a fracture, said second assembled bone block comprising two segments of cortical bone[[:]]

~~wherein in spanning two or more vertebrae, or in spanning a bone fracture site, said soft tissue implant is attached to sites on said vertebrae or bone by attaching means, and said processed dermis implant covers at least a front, a back, or a side of at least one intervertebral disc junction or bone fracture site.~~

69. (Currently amended) The soft tissue implant of claim 68, wherein said middle section comprises ~~comprised of~~ dermis, fascia, pericardium, woven soft tissue, urinary bladder matrix, peritoneum, or SIS demineralized bone.

70. (Currently amended) The soft tissue implant of claim 68, wherein said ~~top section and said bottom~~ the first end and the second end of said middle section are calcified.

71. (Currently amended) The soft tissue implant of claim 68, wherein said top section and said bottom section ~~each have two apertures for attachment, positioned for attachment of said implant to the body of vertebrae~~ comprise allograft bone.

72. (Currently amended) The soft tissue implant of claim 68, wherein said top section and said bottom section ~~each have two apertures for attachment, positioned for attachment onto two vertebrae, each said vertebra having spinous processes, and said implant attaches to said spinous processes of said two vertebrae by fastening means through said apertures into said processes~~ comprise xenograft bone.

73. (Currently amended) An implant for ~~attachment to the surface of a~~ use as a tension band between vertebrae in a patient in need thereof, comprising a longitudinal section device having a top section, a bottom section, and a middle section, the middle section being flexible, wherein the top and the bottom sections each comprise an assembled bone block ~~has~~ having a plurality of holes ~~suitable for passage of attachment means to attach said implant to at least two~~ that facilitate attachment to a corresponding vertebrae.

74. (Currently amended) The implant of claim 73, wherein said ~~implant~~ middle section is fabricated from a material selected from the group consisting of segmentally demineralized bone, fascia, pericardium, ligament, tendon, muscle; ~~dura; xenograft demineralized bone; xenograft segmentally demineralized bone; or any~~ , dura, xenograft



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demineralized bone, xenograft segmentally demineralized bone and a combination thereof of these implant materials, and ~~optionally in combination with biocompatible synthetic materials.~~

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